

## HIGHLY VERSATILE PROCESS CONTROL SYSTEM CONTROLLER

### ABSTRACT OF THE INVENTION

A versatile controller that can be used as either a stand-alone controller in a relatively small process plant or as one of numerous controllers in a distributed process control system depending on the needs of the process plant includes a processor adapted to be programmed to execute one or more programming routines and a memory, such as a non-volatile memory, coupled to the processor and adapted to store the one or more programming routines to be executed on the processor. The versatile controller also includes a plurality of field device input/output ports communicatively connected to the processor, a configuration communication port connected to the processor and to the memory to enable the controller to be configured with the programming routines and a second communication port which enables a user interface to be intermittently connected to the controller to view information stored within the controller memory. When used in a distributed process control system, the controller platform may be used as a remote input/output device and the ports of this remote input/output device may be logically mapped to controllers within the distributed process control system in a manner that is different than the physical connection between such controllers and the remote input/output device.